#### **DE1484**

# **REMARKS**

This Supplemental Preliminary Amendment is being filed in order to subsitute a newly amended section of page 2 for the section of page 2 previously submitted with the Preliminary Amendment filed on August 11, 2003. This is necessary because of a typographical error in paragraph (b) of that page wherein the symbol  $\in$  was typed in the place of the symbol  $\varepsilon$ .

It is respectfully requested that the application should now proceed to prosecution.

Respectfully submitted,

Dated: September 9, 2003

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FOR

METHOD FOR IDENTIFICATION BASED ON BILINEAR DIFFIE-

**HELLMAN PROBLEM** 

EXAMINER:

to be assigned

GROUP:

to be assigned

### **CERTIFICATE OF MAILING**

I hereby certify that a *SUPPLEMENTAL PRELIMINARY AMENDMENT* is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop: Initial Patent Examination Division, US Patent & Trademark Office, POB 1450, Alexandria, VA 22313-1450 on September 11, 2003.

Audrey De Souza

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## Newly Amended Section of Page 2 Corresponding to the Last Paragraph

The procedure of the Fiat-Shamir scheme can be expounded as follows. A reliable system administrator selects a sufficiently large number n. Then, A prover selects his own private key a that is relatively prime with n, and calculates  $b = a^2 \mod n$ . The prover discloses b. Then, the following protocol is repeated for a number of times:

- (a) The prover selects a random integer  $r \Box Z_n^*$   $r \in Z_n^*$ , where  $Z_n^*$  is a multiplicative group of order n, calculates  $x = r^2$ , and sends x to the verifier;
- (b) The verifier selects a random number  $\Box \Box \{0,1\}$   $\underline{\varepsilon} \subseteq \{0,1\}$ , and sends  $\Box \varepsilon$  to the prover;
- (c) On receiving  $\oplus \underline{\varepsilon}$ , the prover calculates  $y = r \oplus a^{\oplus} \underline{y} = r \cdot \underline{a}^{\varepsilon} \mod n$  and sends y to the verifier; and
- (d) The verifier examines whether  $y^2 = x \Box b^{\Box} y^2 = x \cdot b^{\varepsilon} \mod n$  is established. If true, then the verifier accepts the prover as a legitimate user and, otherwise, stops the protocol.